

the late Dr. George Engelmann, were unanimously adopted by the Botanical Section of the Academy of Natural Sciences of Philadelphia, April 14, 1884:

WHEREAS, The Botanical Section of the Academy of Natural Sciences of Philadelphia has heard with profound regret of the death of Dr. George Engelmann; therefore,

Resolved, We regard this as a calamity to botanical science, and to those who were in any way associated with him in its study; also,

Resolved, That in his life he furnished an example of industry in his profession, of devotion to science, of thoroughness in investigation, and of success in labor, which will always command our admiration and respect; and be it further

Resolved, That by his readiness to aid all who were seekers after the truths of nature, by the conscientious answers to the botanical questions referred to him, no less than by his goodness as a man, we believe he has attached many to the science in whose service he died.

Resolved, That as a mark of respect to the memory of the deceased, these resolutions be entered upon the minutes of the Section, a copy to be transmitted to his family, and also a copy of them be furnished to the *Bulletin of the Torrey Botanical Club* and to the BOTANICAL GAZETTE, with the request that they be published therein.

JOS. T. ROTHROCK.

THOMAS MEEHAN.

JOHN H. REDFIELD.

Collections from Porto Rico.—Herr P. Sintenis (known through his journey in the Orient), is to begin a botanical examination of Porto Rico during the coming summer, under direction of the undersigned. The specimens will be offered at 30 marks (\$7.50) a century. The undersigned will receive the names of subscribers to this collection, but prefers that payments should *not* be made in advance.

DR. T. URBAN, *Schöneberg bei Berlin, Germany.*

EDITORIAL NOTES.

IN DR. VASEY'S Schedule of N. Am. species of *Paspalum*, in the last GAZETTE, p. 55, No. 5 should read *P. vaginatum* instead of *P. variegatum*.

MR. DAVIS L. JAMES recently read before the Cincinnati Society of Natural History a memorial notice of Thomas W. Spurlock, a botanist of considerable local reputation.

THE MARCH NUMBER of *Grevillea* is accompanied with pages 17 to 32 of the new edition of Cooke's Handbook of Fungi, carrying the genus *Agaricus* through to the eighty-seventh species.

IN THE APRIL *Am. Naturalist* Prof. Bessey gives an account, with figures, of the discovery of glands upon the pedicels of *Sporobolus heterolepis*, to which some minute insects had stuck fast. In fact the victims led to the discovery of the trap.

THE BULLETIN of the Natural History Society of New Brunswick, No. III, contains the report of the Botanical Committee, with additions to the New Brunswick Flora, edited by Mr. G. M. Hay. In the list we note *Montia fontana* and *Potamogeton obtusifolius*.

THERE IS MUCH need for more common names for injurious fungi, and a more accurate use of those we now have, so that the terms "mould," "mildew" and "blight," shall not be made to do duty for scores of fungi more diverse in their affinities than oaks, oranges, and pumpkins.

IN THE POSTAL CLUB BOXES of the *Am. Monthly Micr. Jour.*, we note that one contains a slide said to represent "Eleters and spores of *Asterella remisphaerica*," whereupon the editor suggests that it would be better to explain what "eleters" are, in which suggestion botanists will heartily concur.

WE NOTE in the April *Gardener's Monthly* the announcement of the death of Prof. S. B. Buckley, which occurred at his home in Austin, Texas, February 18. His name is very closely connected with Texas botany, and *Buckleya distichophylla*, Torr., is a memorial of his work in the mountains of North Carolina.

IN *Science*, April 4, there is given a capital biographical sketch, with portrait, of Dr. Engelmann. It tells the story so exactly as the GAZETTE would like to have it told, that we refer our readers to it, and in place of a biographical sketch publish in this number a list of Dr. Engelmann's botanical papers.

PAIPALOPSIS IRMISCHLÆ Kühn, the representative of a new genus of smuts inhabiting the flowers of *Primula officinalis* and *P. elatior*, which was described by the discoverer in *Irmischia* for May, 1882, is thought by Winter (*Hedwigia*, Jan., 1884) to be the conidial condition of a *Urocystis*. He hopes to decide the question by means of cultures during the coming season.

IN THE *Edinburgh Medical Journal* for March there is a very interesting sketch of the late Prof. J. H. Balfour. He was born in Edinburgh in 1808, and for thirty-four years filled the chair of botany in the University of Edinburgh. It is said that nearly 8,000 students have been under his tuition, many of whom are scattered over the globe occupying important scientific positions.

THE STATISTICS relating to the present knowledge of the occurrence of wheat rust in England and its dependence upon soil, temperature, moisture, methods of cultivation, etc., are very fully given in the second part of the *Journal of the Royal Agricultural Society* for 1883. The sixty pages devoted to the subject are full of interesting and valuable information, and we regret our space will not allow of a more extended notice.

A CURIOUS INSTANCE of the inconvenience arising from the diversity of language spoken by botanists in different parts of the world, occurs in the February number of *Hedwigia*. Prof. Saccardo, wishing to notice the criticisms made by Mr. Cooke upon his mycologic work, sent a reply written in French, to that journal. Thus an Italian, in order to publicly communicate with an Englishman, clothes his thoughts in the French language, and makes them known through the medium of a German periodical. And yet there are some among us who think it unnecessary to be familiar with any but the mother tongue!

IT IS DOUBTLESS not generally appreciated that the association of barberry bushes with wheat rust is no new thing, even in our own country. Massachusetts in 1755 passed an "act to prevent damage to English grain arising from

barberry bushes" (Province Laws of Mass., 1736-61, p. 153), which provided for all manner of contingencies such as the removal of the bushes from public highways, undivided property, division lines, and lands of careless tenants or proprietors. Any one, after giving due notice, might extirpate any remaining bushes whatever, and charge the expense of the same to the owner of the land, and upon his refusal or neglect to pay, might collect twice the sum by process of law.

THE RESULTS of the study of peach yellows during 1881 and 1882, by Prof. D. P. Penhallow, are given in series III. of the Houghton Farm reports. The attempt has been, not so much to ascertain the cause of the disease, as to establish a satisfactory diagnosis, and to provide a remedy. In these respects, the research has been most painstaking and successful. The report is accompanied by three colored plates, showing healthy and diseased leaves and tissues of the stem, while a fourth gives the appearance of affected trees. The results have been verified by the observations of 1883, lately published in the same series of reports.

MR. L. H. BAILEY, JR., of the Botanic Gardens, Cambridge, has just published a catalogue of North American *Carexes*. This list includes 293 species and 84 varieties, and the latest changes in synonymy are given, as well as the general distribution of each species. Among the many exasperating groups of plants *Carex* holds high rank, and botanists will be very thankful for any help in unravelling what seems often an inextricable tangle. This catalogue is a step in the right direction, and Mr. Bailey has the opportunity of laying botanists under great obligation by his studies in *Carex*. Copies of the catalogue can be obtained from the author at five cents a copy, or fifty cents a dozen.

NINE SPECIES of barberry are now known to harbor the æcidium of *Puccinia graminis*. Two of these are sometimes referred to the genus *Mahonia*, one of which, *Berberis* (*Mahonia*) *aquifolium*, has through the observations of Mr. C. B. Plowright been but recently connected with wheat rust. Of this list *B. Canadensis* is a native of our Southern States, *B. aquifolium* is native of Oregon, and the common barberry is widely although sparsely grown throughout our territory. We have besides two native western species and an ornamental species from Japan. The wheat rust does not seem to be lacking for an opportunity to occasionally reinvigorate itself by the production of cluster-cups, yet it is the opinion of many that some still more common host will yet be detected.

IN SACH'S *Vorlesungen über Pflanzenphysiologie* he discards the four plant elements as given in his text-book, and refers all plant organs to two categories, root and shoot. In a review in the last *Am. Jour. Sci.* Prof. Goodale thus defines the two: The former (the root) comprises that part of the plant which on or in a substratum serves as a hold-fast, and in the latter case acts as an organ for conducting into the plant nutritive matters held in the substratum. The shoot is that part which unfolding outside of the substratum produces plant-substance and serves for propagation, bearing organs of reproduction which are never seen on roots. According to this the rhizoid of a thallophyte and the

root of a vascular plant are the same. It is to be hoped that these lectures will speedily find a translator.

THE COMMITTEE appointed by the American Botanical Club of the A. A. A. S., to make suitable preparations for the meeting at Philadelphia, are arranging a programme as rapidly as the movements of the local committee of the association will permit. They are taking every means to make the occasion one of pleasure and profit. This committee consists of Messrs. J. C. Arthur, of Geneva, N. Y., and J. H. Redfield, of Philadelphia, as originally appointed, who have selected as the third member Mr. Thomas Meehan, of Philadelphia. At a late meeting of the Philadelphia Academy of Sciences, five botanists were appointed to co-operate with this committee, and especially to assist in carrying out the details of the programme during the meeting. They are Isaac C. Martindale, Prof. Joseph T. Rothrock, Dr. J. Bernard Brinton, Wm. C. Stevenson, Jr., and Jos. O. Schimmel.

AT A RECENT meeting of the Botanical Section of the Philadelphia Academy Mr. Meehan exhibited some nuts of *Carya glabra* which had two or three nuts in a single exocarp, as in the common chestnut. Dr. Asa Gray remarked that such specimens were of much morphological significance, and that the conclusion to which they inevitably pointed was as follows: The husk, or so-called exocarp, of *Carya*, is an *involucre*, usually containing a single female flower, and connate with its ovary; its true morphology is revealed when, as in this case, it contains two or three flowers. The stone or shell of the nut is the whole pericarp in *Carya* as much as in *Corylus*. In the former genus it becomes free from the four valved involucre at maturity; in *Juglans* the congenital union is more permanent, forming a drupaceous accessory fruit, of which the fleshy part is involucre, the bony part is pericarp. This view directly homologizes the *Juglandaceae* with the *Cupuliferae*.

A NEW PERIODICAL of considerable interest to botanists and lovers of plants in general has just made its appearance. It is edited and published by J. M. and C. G. Lloyd, of Cincinnati, Ohio, under the name "*Drugs and Medicines of North America*," and is to be, according to the title page, "a quarterly devoted to the historical and scientific discussion of botany, pharmacy, chemistry and therapeutics of the medicinal plants of North America, their constituents, products and sophistications." Let no one be frightened by this formidable cognomen, for its dryness and shoppy flavor scarcely extend beyond the cover. The number before us, consisting of thirty-two royal octavo pages, treats of *Clematis Virginiana*, *Thalictrum dioicum*, *T. anemonoides*, *Anemone nemorosa* and *A. patens*, var. *Nuttalliana*, and is illustrated with thirteen cuts, of which four are full page, one of the latter containing microscopic details of structure. The treatment of each plant is accurate, varied and interesting, and embraces little that every general student of plants would not be glad to know. The heavy paper, fine engravings, and excellent typography leave nothing in this line to be desired. All this in connection with the low annual subscription (\$1.00) should heartily commend it to botanists as well as to physicians and pharmacists.